

Abstract of the Disclosure

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The object of the invention is to create an improved
interferometer ^{is described} which does not require a drive mechanism
for moving a reference surface or test object in order to
tune the interferometer, and which can be tuned in ,
virtually vibration-free manner, thereby preventing
measuring errors.

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Measuring errors. The
For this purpose, the interferometer (10) has at least
one light source, a reference surface (40), a test object
(50) and at least one beam splitter (30). For vibration-
free tuning, the interferometer (10) also contains an
apparatus (60, 70) for the polarization of the
interference beams such that, at the output of the
interferometer (10), they have different polarization
states relative to each other. ^{Additionally, an} ^{is provided} and an analyzer (80),
disposed at the output of the interferometer (10), with a
polarization state that is variable in predetermined
manner, the analyzer (80), as a function of its
polarization state, introducing a defined Pancharatnam
phase into the interference beams for tuning the
interferometer (10).